

Mothers' and Teachers' Estimations of First Graders' Literacy Level and their Relation to the Children's Actual Performance in Different SES Groups

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Abstract

The relationship between mothers' and teachers' estimations of 60 children's literacy level and their actual performance were investigated in two different socio-economic status (SES) groups: low (LSES) and high (HSES). The children's reading (fluency, accuracy and comprehension) and spelling levels were measured. The mothers evaluated their own children and 17 teachers evaluated these same children in the same domains. HSES children exhibited a higher actual literacy level than low SES children, and were estimated as having a higher literacy level by their mothers and teachers. Mothers' estimations were higher than those of teachers, and spelling level was estimated as the lowest domain by teachers and parents. Regression analysis showed that the teachers' estimations were the most accurate regarding the children's literacy level in all domains, whereas the mothers' estimations and family SES partially contributed to the children's actual level. Implications of these findings are discussed.

KEY WORDS: Mothers' estimations, Teachers' estimations, Literacy level, First grade.

Family and schools are considered to be crucial contexts in which children's cognitive development is nurtured and supported. Moreover, it is believed that this development is especially strengthened by sustained participation of these two contexts. Children's literacy knowledge, which is an important aspect of this development, is acquired within a socio-cultural context that includes knowledge, attributions and behavior in the family and school settings (Dickenson, McCabe & Anastasopoulos, 2003; Teale, 2003). In this study we focused on the relationship between knowledge that two key educational figures, i.e. mothers and teachers, have regarding first

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graders' literacy levels. Our goals were to examine the relationship between teachers' and mothers' estimations of children's literacy level and their relation to the children's actual level and to investigate the extent to which this estimation was related to the children's family socio-economic status (SES) level.

Such an effort might provide theoretical understanding from an ecological perspective on how socio-cultural contexts (parents/home compared to teacher/classroom) shape our beliefs and perceptions and which may later influence our behavior (Okagaki & Strenberg, 1993b). For example, social class differences may lead to specific differences in parental beliefs that are also related to child development (Kohn, 1969). It may also lead to practical information in learning about parents' and teachers' estimation of children's performance compared to direct assessment, which may contribute to improving children's literacy skills. For example, parents who tend to rate their children at a higher level than their actual performance may not have a firm understanding of early literacy development. Parent education efforts can therefore be made to support this direction. Furthermore, indirect teacher estimations may be less time consuming than direct assessment of children's skills and can be added as a valid tool to the assessment batteries available for monitoring children's progress.

Learning to read and write in first grade is one of the greater challenges that children face during this year both at school and at home (Perry & Weinstein, 1998; Sameroff & Haith, 1996). The transition from kindergarten to the formal schooling system is an important process not only for the children but also for parents. During the first year at school children systematically acquire the knowledge of reading as well as writing. This includes reading fluency, reading accuracy, reading comprehension, and spelling. In the last three decades more emphases were placed on teaching writing (including spelling) in parallel to teaching reading beginning in first grade. However, teachers still tend to view reading as a basic skill with which to begin formal teaching, whereas they view writing, and especially spelling, as a more complicated ability (Bereiter & Scardamelia, 1984; Eckhoff, 1983).

Reading fluency plays an important role in theoretical models of reading acquisition (Wolf & Katzir-Choen, 2001). The verbal efficiency model suggests, for example, that slow word-processing speed interferes with automaticity of reading and therefore with comprehension (Perfetti, 1985). The importance of these aspects of reading (fluency, accuracy, and comprehension) for the development of competent reading skills has received more attention from researchers in the last decade (Thaler, Bener, Wimmer & Landerl, 2004).

During the first year at school many parents, usually the mothers (Holden, 1997; Levin, Levy-Shiff, Appelbaum-Peled, Katz, Komar, & Meiran, 1997), engage in literacy activities with their children (Baker, Fernandez-Fein, Scher, & Williams, 1998; Tudge & Putnam, 1997). For example, first graders may practice book reading with their parents, while parents respond to their children's miscues (Evans, Bell, Mansell & Shaw, 2001). Parents also support their children's homework by guiding them in reading and writing (Levin, et al., 1997). The parents are thus exposed to the children's reading fluency, accuracy, and comprehension, including spelling skills, and as a result may monitor their children's performance. We assumed that this educational process, which is undertaken by parents at home and by teachers in school, includes an "estimation phase" of the children's actual knowledge in order to know how to appropriately guide them towards the next step. This type of assessment was described by Vygotsky (1978) as part of the work that educators do in order to meet children's "zone of proximal development." For example, the parent may be aware that if the child can easily read the word "cat," he/she may also be able to spell it. The linkage between estimation and teaching is a crucial issue in educational processes in all ages and domains, including literacy education for school beginners. Thus, parents' and teachers' estimations of children's literacy knowledge in the first grade may play a vital role in their development.

Children's reading and writing success in the elementary grades seems crucial since it is a strong predictor of academic achievements in later years, despite remedial efforts that are usually made to strengthen the skills of low achievers in later years (Scarborough, 2001). According to Scarborough (2001), about 65%-75% of the children who were designated as reading-disabled at elementary age continue to read poorly throughout their school careers. It would therefore seem that identifying children at risk for reading and writing disabilities *before* acquiring formal reading and as soon as they start school is crucial so that steps can be taken to prevent their future academic difficulties. This practice is usually carried out informally by many parents and teachers and is called "estimation." When this process is carried out by teachers or literacy experts (from the outside school system) as a more formal procedure of collecting and analyzing data to improve educational programs, it is usually referred to as "evaluation" or "assessment." In our study we refer more to the informal act of this procedure, i.e. the estimation.

Interestingly, parents' estimations are sometimes considered to be more predictive of children's development than objective measures of children's achievements (Eccles, 1983; Entwisle & Baker, 1983).

Research results indicated correlations between children's performances and the accuracy of their mothers' predictions, i.e. the more accurate the mother's judgment of her child's functioning, the higher the child's performance. These results are regarded as indicating that mothers who inaccurately estimate what their children can (or cannot) do fail to provide suitable support for the child compared to more accurate mothers (Colter & Shoemaker, 1969; Delago-Hachey, 1984; Miller, 1986). However, evidence for the "match" hypothesis is not consistent. For example, Sattler, Feldman and Bohanan (1985) found no relationship between children's language ability as measured by the PPVT and their mothers' estimations. Parents' accuracy in estimating their children's academic functioning is important for all parents and children. However, it is an especially vital issue for LSES children who are prone to academic failure (Douglas, 2000; Snow, Burns & Griffin, 1998; Whitehurst & Longian, 1998). Attacking this problem through parents' estimations, as part of a wider cultural system that influences estimations, behaviors, and achievements might serve to illuminate concerns about the success of LSES children in school. Stevenson, Chen, & Uttal (1990), for example, studied white, black and Hispanic mothers and their elementary school children and found a significant and positive relationship between mothers' ratings of their children's abilities in reading and mathematics and the children's actual achievements in all three groups: white ($r=.43$), black ($r=.34$), and Hispanic ($r=.30$). The mothers' mean years of education in the three ethnic groups were: white ($M=13.8$), black ($M=12.8$) and Hispanic ($M=9.8$). Martin and Johnson (1992) also found no correlation between the mothers' education level (an important factor in defining a SES group) and their accuracy in estimating their children's functioning. These findings suggest that mothers with a low education level can be as accurate in estimating their children's academic level as mothers with a high education level.

Little evidence is available on parents' estimations of children's literacy levels, including during the important stage of entering formal schooling. In a recent study in Israel it was found that, contrary to expectations, no differences existed between mothers with low education (between 8-12 school years) and those with high education (between 15 to 18 school years and more) in their accuracy of estimating their children's emergent literacy level (Authors, in press). These findings are important, since it would be expected that less educated parents, usually from the LSES group, would be inaccurate in their attributions of their children's knowledge in different domains, including literacy. More studies are needed to untangle the question of the "match hypothesis," especially regarding children from different SES communities.

The teacher is an important and obvious source of information for parents regarding their children's development and achievements. Parents of school children, especially in the elementary grades, tend to be in close contact with teachers (Epstein & Dauber, 1991; Stevenson & Baker, 1987). This contact includes formal (e.g., parent-teacher conference, report cards) and informal communication (e.g., conversation when parents pick up their children from school, or in other school events). This contact enables parents to become acquainted with the teachers' estimation of the children's abilities in different areas, including reading and writing.

The relation between mothers' and teachers' estimations of children's functioning are important when trying to understand how "educational experiences within and outside the family system are mediated" (Martin & Johnson, 1992, p. 95). It is assumed that congruence between the attributions of mothers and teachers, the most meaningful figures in young children's cognitive development, is important for the children's development. Incongruence between parents and teachers may cause children to receive inconsistent messages from the critical adults in their lives who evaluate their behavior. This could be confusing for children and therefore not supportive of their learning experiences. For example, children had significantly higher averages in school when their mothers and teachers were relatively highly congruent than when they were relatively low in congruence (Peet, Powell & O'Donnell, 1997). However, many researchers reported that mothers generally hold more optimistic views about their children than teachers and often overestimate their functioning (Hiebert & Adams, 1987; Martin & Johnson, 1992; Stevenson, et al., 1990) or other objective measures (Hunt & Paraskevopoulos, 1980; Miller, 1986). This phenomenon might be explained by the different settings in which parents and teachers act (home and school) (Winetsky, 1978) and by the more "objective" point of view that teachers might have regarding the children.

The accuracy of teachers' and mothers' estimations of children's actual reading and writing levels and their relation to family SES level is interesting and important. LSES parents are expected to be less accurate regarding their first-grade children's knowledge of reading and writing than HSES parents since they lack the educational level to carry out this estimation. Teachers might underestimate them due to their underestimation of children from LSES families (Stahl, 1991). For example, Scott and Teddlie (1987) reported that 250 teachers from 75 schools which evaluated their third-grade students tended to rely more on the children's SES level than on their actual knowledge. Similar findings were reported by David (1983).

The present research focused on the following factors: Israeli mothers' and teachers' estimations regarding the same first graders' literacy functioning, the children's "objective" performance in these skills and the mothers' SES level. These variables have not received adequate attention in previous studies.

Almost all previous researchers of parents' or teachers' estimations focused on children's mathematics achievements. Few studies have investigated the domains of literacy. Two studies reported that parental estimations were related to children's objective measures in letter names and emergent writing (Aram & Bastaker, in press; Hiebert & Adams, 1981), including phonological awareness (Aram & Bastaker, in press). Another study reported that parents of language-impaired children rated their children more poorly in early literacy knowledge (phonological awareness, alphabet knowledge, etc.) than parents of typically developing children (Boudreau, 2005).

This issue was explored further in the current research by examining children's literacy in the first grade and included teachers' estimations and the estimations of mothers from two (low and high) SES groups.

More specifically, the goals of this study were to examine: (a) the relationship between teachers' and mothers' estimations of children's literacy level (independent variable), (b) its relation to the children's actual level (dependent variable) and (c) the extent to which this estimation is related to the children's family SES level (independent variable). Four hypotheses were proposed: (1) Low SES children will be estimated with a lower literacy level than high SES children; (2) The mothers' estimations will be higher than those of the teachers; (3) Estimation will be lower regarding spelling than reading; (4) The family SES, the teachers' estimations, and the mothers' estimations will contribute to the children's actual literacy level and the extent of the contribution will be in this order.

Method

Participants

A total of 60 5-6-years-old children, 30 girls (LSES, $n=15$; HSES, $n=15$) and 30 boys (HSES, $n=15$; LSES, $n=15$) and their mothers participated in this study. They were recruited from 17 schools located in urban neighborhoods of the greater Tel-Aviv area, Israel. The criteria of low and high SES neighborhoods were based on the list of the Israel Central Bureau of Statistics report (1995).

Nine of the 17 schools were situated in HSES neighborhoods and 8 in LSES neighborhoods. Simple random sampling was used. In each school, participants were solicited by letters sent to parents. The letter

from the researchers was distributed via the school and included information on the aim of the study (learning about children's academic development) as well as the importance of the study. Mothers who gave their consent participated in the study with their children. We stopped recruiting after obtaining the consent of 30 parents in each SES group. Three or four children from each school (studying in the same home class) participated in the study. All children came from Jewish Hebrew-speaking homes. The families were given a children's book as compensation for their participation.

Table 1 presents the demographic characteristics of the two SES groups that participated in the study.

Table 1
Characteristics of the low and high SES groups (N=60)

		LSES (N = 30)		HSES (N = 30)		<i>t</i>
		<i>MD</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
School level ^a						
	Mother	2.39	0.88	4.33	0.76	9.00***
	Father	2.04	0.85	3.93	0.90	8.00***
Profession level ^a						
	Mothers	2.93	1.18	4.50	1.23	4.96***
	Fathers	2.96	0.98	4.82	0.48	8.90***
Family Income ^a		2.96	0.96	3.80	0.76	3.68***

Note: *** $p < .001$

^a Range of level is 1-5

The table shows that the fathers' education level and the mothers' and fathers' professional levels are significantly higher in the HSES than in the LSES group. These advantages also appear in the family income.

Research Tools

Children's literacy level. Children's literacy level was assessed by three measures: reading, reading comprehension, and spelling. All inter-rater reliabilities in this study were calculated by two graduate students. They were all trained by the principle researcher of this study.

Reading. Reading was measured using two tests. The first test

measured accuracy and fluency of reading of a short story called "Where is Amir's turtle?" (Shalom & Vohll, 1996). The story has 67 words with no drawings or graphical cues. It includes all the letters and vowels of the Hebrew script. Accuracy of reading was measured according to success in the number of word readings (range 0-67). Fluency was measured by counting the number of words read in 1 minute. Inter-rater reliability measured by Cohen's kappa was $k=.98$ ($p<.001$) for this measure. The second test measured the accuracy and fluency of 12 regular words and 12 pseudo-words. The words consisted of two syllables. Accuracy of reading was measured according to the success in word reading (range 0-24). Inter-rater reliability measured by Cohen's kappa was $k=.88$ ($p<.001$) for this measure.

All measures were converted to percentages and a 0-100 score was created for the reading level. The mean score of the reading measure was $M=77.90$, $SD=17.79$ and Cronbach's alpha was .80.

Reading comprehension. Reading comprehension was measured using two tests. The first test measured the comprehension of the above-mentioned story, "Where is Amir's turtle?" After completing the vocal reading the child was asked four open questions related to the main story line. Two questions were more factual and two were inferential. Inter-rater reliability measured by Cohen's kappa was $k=.81$ ($p<.001$) for this measure. The kappa measure for two judges' reliability was $.81<.001$.

The second reading comprehension test was a standard multiple-choice test for Hebrew speaking children (Ortar, 1976). The children were tested in 7 out of the 21 items which are suitable for first graders. The level of comprehension goes from the easy to the more difficult items, i.e. from reading words to sentence to small texts (range 0-7). All measures were converted to percentages and a 0-100 score for reading comprehension was created. The mean score of the reading measure was $M=62.43$, $SD=17.43$ and Cronbach's alpha was .68.

Spelling. The spelling test included 20 Hebrew words which represent orthographic knowledge and root written knowledge (Levin & Aram, in preparation). The score was based on the percentage of letters written correctly out of the entire 20 words. Inter-rater reliability measured by Cohen's kappa was $k=.86$ ($p<.001$) for this measure. The mean score of the spelling measure was $M=74.34$, $SD=11.96$ and Cronbach's alpha was .70.

Demographic questionnaire

The mothers were asked for information about their family's current SES, including their and the father's education level (number of school years), profession, and the family's income level. The data

provided by the mothers was transformed to a 5-point scale (from 1=low to 5=high). The parental education scale ranged from 1=6 years of schooling or less to 5=20 years of schooling or more. The professional qualification and current occupation scale ranged from 1=unskilled workers and menial industrial laborer to 5=higher executives and major professionals. The family's income level was based on the mother's ranking of the family income compared to the established average in Israel during the research period (this information was given to the mothers). The mothers' rankings ranged from 1=much below the national average to 5=much above the national average.

Mothers' and teachers' estimation questionnaire

The mothers ($n=60$) and the teachers ($n=17$) were asked to estimate the children's literacy level compared to the children's classmates in three domains: reading, reading comprehension, and spelling, on a 5-point scale representing 6%, 22%, 44%, 22% and 6% of the children from the lowest to the highest rank, respectively. When making their estimations on the 5-point scale, the mothers were asked to consider such a distribution and to place their children in one of the five categories in each domain. The questionnaire included 4 representative items from the tests which we gave to the children in each of the three domains. For example, for reading accuracy one item referred to story-reading accuracy, one to story-reading fluency, one to the accuracy of word reading, and one to the accuracy of reading pseudo-words. For example, "if we will present a short story to your child, how would you rank her/his accuracy of reading the story compared to his/her classmates: among the best readers in class, among moderate to high readers, among the moderate readers, etc."

This 5-point assessment scale was used to standardize the estimation measure used by the mothers and the teachers and to minimize biases between and within these two groups. Since teachers of lower grades are known to sometimes give poorer students higher grades in order to encourage them, our assessment scale was also intended to avoid the occurrence of such biases in the teachers' estimations (see Levin et al., 1997). According Levin et al. (1997), who used this scale for teachers' attributions of first graders in reading, mathematics and homework, Cronbach's alpha for these three measures was .82. Positive and significant correlations ($r=.60$, $p<.001$) were reported between the teachers' attributions in this scale in first grade and the teacher's attributions of the same children in the third grade.

Procedure

Data were collected in three sessions. In the first session the

children's literacy level was investigated individually in their schools. In the second session, an interview was held in which the mothers' demographic information was collected as well as their attributions of their children's literacy (reading, reading comprehension, and spelling) on a 5-point scale. In the third session, the same 5-point scale used to estimate the mothers' appraisal of their children's literacy level was administered to the 17 teachers of the classes that participated in this research. Each teacher assessed the 3 or 4 children in her class who participated in the study. Each child was thus assessed by mother and teacher.

Results

Four hypotheses were proposed: (1) Low SES children will be estimated with a lower literacy level than high SES children; (2) the mothers' estimations will be higher than those of the teachers; (3) estimation will be lower regarding spelling than reading; (4) the family SES, the teachers' estimations and the mothers' estimations will contribute to the children's actual literacy level and the extent of the contribution will be in this order.

Data regarding the children's actual literacy level are presented first. This is followed by more detailed statistics to meet our hypotheses on the relationships between the mothers' and the teachers' estimations of the children's literacy, and on the contribution of the family SES, the teachers' estimations, and the mother's estimations of the children's reading and spelling levels.

Children's actual level

Table 2 presents the general score of the children's actual level, and the mothers' and teachers' estimations according to the SES group.

Table 2
Children's literacy level in the low and high SES groups

	LSES (N = 30)		HSES (N = 30)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Reading fluency	164.06	122.70	88.38	39.60	3.22**
Reading accuracy	107.32	26.35	120.09	6.74	2.58*
Reading comprehension	58.63	19.80	66.22	13.97	1.72*
Spelling	72.19	11.42	76.49	12.28	1.40^

^ $p < .07$ * $p < .01$. ** $p < .001$.

According to this table, children in the HSES group exhibited a higher actual literacy level than those from the low SES in all investigated domains. Relationships between the mothers' and the teachers' estimations of the children's literacy level according to SES group are presented in Table 3.

Table 3
The mothers' and the teachers' estimations of the children's literacy level by SES group (N=60)

Literacy Estimation ^a		LSES		HSES	
		Mothers	Teachers	Mothers	Teachers
Reading fluency	<i>M</i>	4.04	3.63	4.21	4.17
	<i>SD</i>	0.80	1.07	0.90	0.88
Reading accuracy	<i>M</i>	4.07	3.74	4.28	4.28
	<i>SD</i>	0.82	0.90	0.80	0.92
Reading comprehension	<i>M</i>	4.33	4.03	4.70	4.51
	<i>SD</i>	0.63	0.87	0.45	0.73
Spelling	<i>M</i>	3.60	3.00	3.80	3.34
	<i>SD</i>	0.84	1.77	0.97	1.04

^a Range of level is 1-5

A 3-way repeated-measures ANOVA of 2 (SES: high vs. low) x 3 (type of score: mothers', teachers' estimations and domain) x 3 (domain of estimation: reading fluency, reading accuracy reading comprehension, and spelling) indicated a main effect for SES ($F(1, 54)=4.12$, $\eta^2=0.7$, $p<.05$). The children's literacy estimations were higher ($M=4.16$, $SD=0.12$) in the HSES than in the LSES group ($M=3.80$, $SD=0.12$). A main effect was also found for estimator ($F(1, 54)=13.38$, $\eta^2=.19$, $p<.001$). The mothers' estimations ($M=4.12$, $SD=0.80$) were higher than the children's actual scores ($M=3.84$, $SD=0.10$). A main effect of differences was also found between domains of estimation ($F(3, 54)=41.06$, $\eta^2=.43$, $p<.001$). Spelling ($M=3.43$, $SD=0.11$) was estimated as the lowest domain compared to fluency of reading ($M=4.01$, $SD=0.11$), accuracy ($M=4.09$, $SD=0.10$) and reading comprehension ($M=3.39$, $SD=0.07$). Furthermore, reading comprehension ($M=4.39$, $SD=0.07$) was estimated higher than reading fluency ($M=4.01$, $SD=0.11$) and accuracy ($M=4.09$, $SD=0.10$). Interaction was found between estimator

and domain ($F(3, 54)=2.74$, $\eta^2=0.4$, $p<.04$). Similarly to the above, the teachers and mothers (separately) estimated spelling lower than all other domains and reading comprehension as higher than fluency and accuracy of reading. The teachers estimated spelling ($M=3.17$, $SD=0.14$) lower than the mothers' estimations ($M=3.70$, $SD=0.12$).

These results are in agreement with our hypotheses, i.e. low SES children were estimated with a lower literacy level than high SES children and the mothers' estimations were higher than those of the teachers. In accordance with our assumption, spelling was estimated by both educators as the most difficult skill compared to all other investigated domains.

We performed a hierarchical regression analysis in order to explore the possible contribution of the family's SES, the teachers' estimations, and the mothers' estimations to the children's literacy level in each domain, entering SES as the first predictor, the teachers' and mothers' estimations as the second, and the interaction between these independent variables third. The variables were used in z scores in order to avoid multicollinearity problems (Aiken & West, 1991). The results of this analysis are presented in Table 4.

Table 4 shows that family SES explained 13% of the child's reading fluency and the teachers' estimations explained 34% beyond the SES. The mothers' estimations added another 13% to this explanation beyond the former variables. Interaction appeared between teachers and SES ($F(3, 48)=3.26$, $p<.02$). We calculated the regression lines of the teachers' estimations for low and high SES in order to examine the source of interaction between the teachers' estimations and SES on the children's reading fluency. Figure 1 presents the results.

This figure shows that no correlation appeared between teachers' estimations and reading fluency ($b=-14.38$) for the HSES group, while a negative correlation was found for the LSES group ($b=-60.6$). The higher the teachers' estimations, the lower the children's actual reading fluency.

Table 4 shows that regarding reading accuracy, family SES explained 10% of the children's reading accuracy while the teachers' estimations explained 21% beyond SES. The mothers' estimations added another 16% to this explanation beyond the former variables. Interaction appeared between teachers' estimations and SES ($F(3, 49)=5.03$, $p<.004$). We calculated the regression lines of this interaction in order to examine the source of interaction between the teachers' estimations and SES on the children's reading accuracy. Figure 2 presents the results.

This figure shows that no correlation appeared between the teachers' estimations and the children's reading accuracy for the HSES

Table 4
Summary of hierarchical regression analysis for variables predicting
children's general and specific emergent literacy (EL) levels across SES
(N=90)

Variable		<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>R</i> ²	ΔR^2
<u>Reading fluency</u>							
Step 1						.13**	.13**
	SES	-61.80	21.79	-.36	2.84**		
Step 2						.47***	.34***
	SES	-34.54	18.06	-.20	1.90**		
	Teachers' estimations	-48.60	11.49	-.56	4.22***		
	Mothers' estimations	-5.95	11.56	-.07	.52		
Step 3							
	SES	-42.30	17.17	-0.25	2.46 *		
	Teachers' estimations	-60.60	13.62	-0.70	4.45***		
	Mothers' estimations	-5.84	15.80	-0.07	0.37		
	SES X teachers' estimations	46.22	22.96	0.34	2.01 *		
	SES X mothers' estimations	-10.59	22.60	-0.09	0.47		
	Teachers' estimations X mothers' estimations	17.10	10.46	0.17	1.64		
<u>Reading accuracy</u>							
Step 1						.10*	.10*
	SES	10.50	4.28	.32	2.45*		
Step 2						.32***	.22 **
	SES	6.40	3.98	.19	1.61		
	Teachers' estimations	6.08	2.59	.36	2.35*		
	Mothers' estimations	2.65	2.46	.16	1.08		
						.48 ***	.16**

Table continued overleaf

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>R</i> ²	ΔR^2
Step 3 (Reading Accuracy)						
SES	8.04	3.65	.24	2.21*		
Teachers' estimations	11.09	3.28	.66	3.38**		
Mothers' Estimations	.48	3.18	.03	.15		
SES X teachers' estimations	-13.10	4.77	-.56	2.75**		
SES X mothers' estimations	3.92	4.77	.17	.82		
Teachers' estimations X mothers' estimations	-5.04	2.11	-.29	2.39*		
Reading Comprehension						
Step 1					.04	.04
Step 2					.35***	.31***
SES	7.27	4.63	.21	1.57		
Teachers' estimations	6.16	2.27	.35	2.71**		
Mothers' estimations	6.46	2.52	.34	2.56*		
Step 3					.37***	.02
SES	.74	4.35	.02	.17		
Teachers' estimations	4.50	3.04	.26	1.48		
Mothers' estimations	.52	5.82	.02	.09		
SES X teachers' estimations	2.15	4.86	.08	.44		
SES X mothers' estimations	.52	5.82	.02	.09		
Teachers' estimations X mothers' estimations	-2.80	2.80	-.14	1.00		

Variable		<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>R</i> ²	ΔR^2
<u>Spelling</u>							
Step 1						.06	.06
	SES	5.08	2.75	.24	1.85		
Step 2						.36***	.30***
	SES	3.24	2.35	.16	1.38		
	Teachers' estimations	4.27	1.32	.41	3.23 **		
	Mothers' estimations	2.32	1.31	.22	1.77		
Step 3						.45***	.10*
	SES	3.94	2.25	.19	1.75		
	Teachers' estimations	6.21	1.72	.60	3.60**		
	Mothers' estimations	.85	1.97	.08	.43		
	SES X teachers' estimations	-2.19	2.54	-.14	.86		
	SES X mothers estimations	2.20	2.55	.16	.87		
	Teachers' estimation X mothers' estimations	-3.71	1.38	-.30	2.69**		

* $p < .05$. ** $p < .01$. *** $p < .001$.

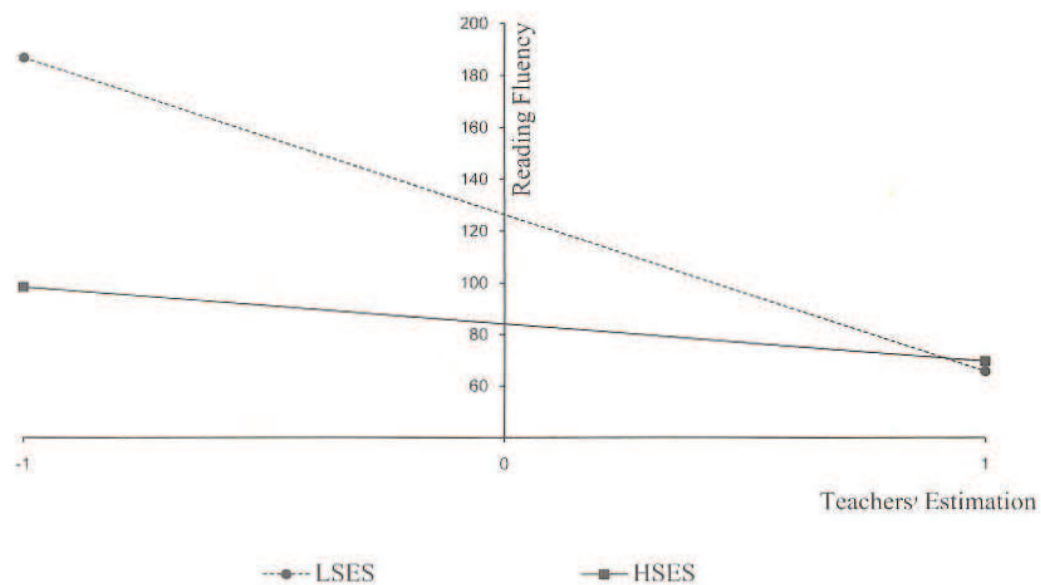


Figure 1. Interaction between the teachers' estimations and SES on the children's reading fluency

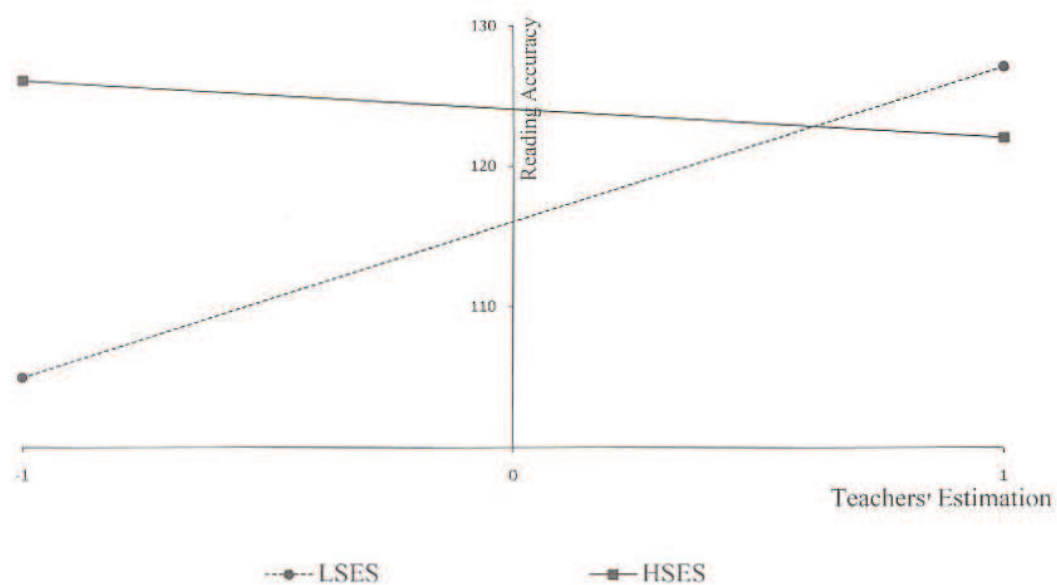


Figure 2. Interaction between the teachers' estimations and SES on the children's reading accuracy

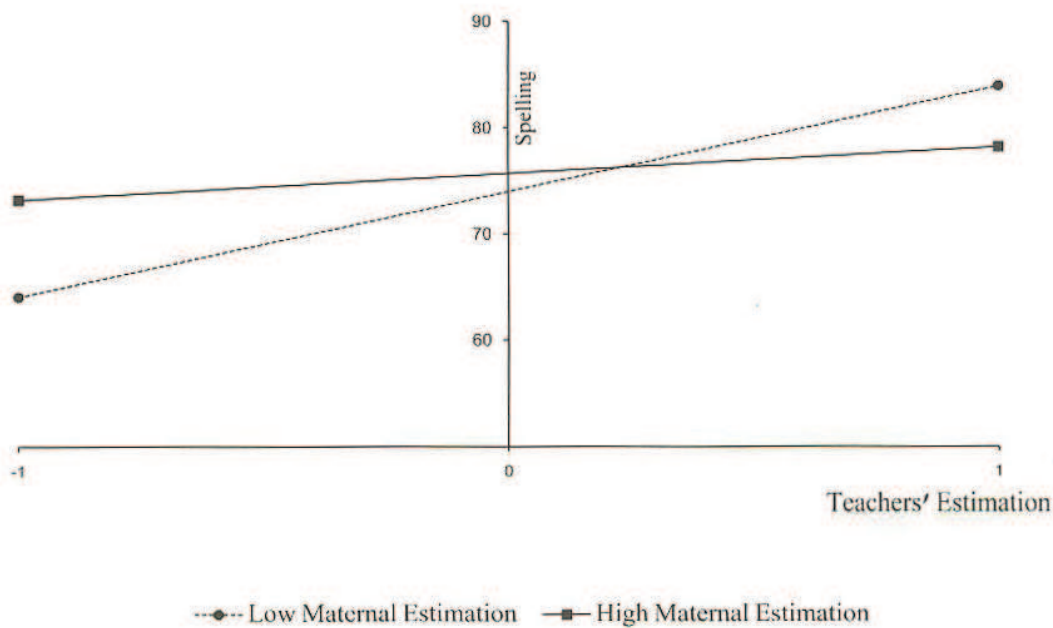


Figure 3: Interaction between the teachers' estimations and the mothers' estimations for spelling

group ($b=-2.01$), while a positive correlation was found in the LSES group ($b=11.09$) between the teachers' estimations and the children's actual reading accuracy. Table 4 also shows that only the teachers' estimations contributed significantly (31%) to the variance of reading comprehension, whereas family SES and the mothers' estimations made no contribution to this skill.

Table 4 indicates that for spelling, the teachers' estimations contributed significantly (30%) to this skill, whereas the mothers' estimations added 10% beyond this estimation. Family SES made no contribution. Interaction appeared between the teachers' estimations and the mothers' estimations ($F(3, 49)=2.90, p<.04$).

We plotted the regression lines of the teachers' low estimations (1 standard deviation below the mean score) and the mothers' high estimations (1 standard deviation above the mean score) in order to examine the source of interaction between the teachers' and the mothers' estimations for spelling. Figure 3 presents the results.

Figure 3 shows that there is no correlation between the teachers' estimations and the children's level for high mothers' estimations of their children's spelling ($b=2.50$), whereas there are positive and higher correlations between the mothers' estimations and the children's spelling level for low mothers' estimations ($b=9.92$).

Discussion

In this research we investigated the relationship between mothers' and teachers' estimations and children's literacy level among Israeli first graders from two different SES communities. Our main findings indicated that the LSES children's actual scores in reading and writing are lower than those of the HSES children. Accordingly, they were estimated with a lower literacy level. The mothers' estimations were higher than those of the teachers, and the estimations of both the teachers and the mothers were lower regarding spelling than all other skills. Furthermore, the teachers' estimations were the most accurate regarding all children's literacy skills. This was followed by partial accuracy of mothers and partial contribution of the children's family SES.

In accordance with the vast literature (Bowey, 1995; Feitelson & Goldstein, 1986; Lonigan, Burgess, Anthony & Baker, 1998; Reese, 1995), the children from the HSES group exhibited higher scores in literacy levels than those from the LSES group. The data show that mothers and teachers are aware of the children's level. Therefore, both mothers and teachers gave a higher estimation of the HSES children's level than of LSES children. These results, which were found in first graders, support similar earlier evidence found in Israeli kindergarten children (Authors, 2003; 2008). This might imply that mothers and teachers are, in general, aware of the children's early literacy levels, a domain which has not yet been studied formally or systematically.

As expected, the mothers' estimations were higher than those of the teachers. These findings are in agreement with the literature which presents mothers' tendencies to overestimate their children's cognitive abilities in different domains (Martin & Johnson, 1992; Stevenson, et al., 1990), including the domain of emergent literacy (Hiebert & Adams, 1987). Teachers' estimations are usually regarded as professional and close to objective measures. A psychological explanation for parents' optimistic estimations has already been presented in the literature. This explanation suggests that parents perceive their children's achievements as their own personal success (Hunt & Paraskevopoulos, 1980; Miller, 1986). The overestimation found in the teachers' estimations might also stem from a tendency to attribute the children's success to the kindergarten program and their own teaching success.

The estimation of teachers as well of mothers was lower regarding spelling than all other skills. This result supports our assumption that although teachers and parents of first graders of today are involved in teaching writing more than previously (this is true at least for Israel), and although it is thought that both skills, i.e. reading and writing, contribute to each other (Ehri, 1997; Morris & Perney, 1984),

spelling is still estimated as a more difficult skill for children than reading. It is possible that parents and teachers of first graders perceive the children's non-formal spelling form as a type of difficulty and less as a long developmental path. Formal spelling does indeed require letter-sound correspondence, phonological and morphological awareness, and of course knowledge of the grammatical rules and their exceptions. All these abilities have their own developmental trends and it sometime takes several years of schooling, at least regarding Hebrew spelling (see Ravid, 2004). Nonetheless, other skills, such as reading comprehension, could also be perceived as the most difficult ability, and not especially spelling. Thus, more in depth research is necessary in order to elucidate why teachers and mothers of school beginners perceive children's spelling skills as more difficult than other literacy abilities, and why this more traditional thought is maintained.

One of our important findings was that teachers were the most accurate regarding all children's literacy skills measured in our study, but that mothers were also accurate regarding their children's reading and spelling. We also found that the children's family SES level makes its own contribution to their fluency and accuracy of reading. Teachers' accuracy is not surprising evidence, since this is their profession. Indeed, our data show that outside school objective professional assessments correlate well with teachers' estimations. From the educational perspective, this might indicate that teacher ratings, which are less time-consuming than direct assessment of children's skills, may also be very useful and may be added as a valid tool to the children's progress monitoring assessment batteries. Interestingly, mothers were accurate regarding their children's reading accuracy and spelling level. It is possible that first graders' habit of reading books to their parents while their parents listen to them and work on their miscues (Evans, et al. 2001), which is supportive of the children's homework, often takes place with mothers (Levin et al., 1997) and that this contributed to the mothers' knowledge. Mothers were less accurate, however, regarding their children's reading fluency and text comprehension. These results are important, taking into account what parents know and do not know about their children's literacy abilities and what can be done about it by the education system.

Family SES predicted reading fluency and accuracy. This means that the higher the children's family SES, the higher their predicted fluency and accuracy of reading. These basic skills (compared to spelling and reading comprehension which appear more complicated) might be related to the intensive book reading to which HSES children are exposed during their early years by their parents compared to the limited exposure of LSES children (Bus, van Ijzendoorn & Pellegrini,

1995; Scarborough & Dobrich). In Israel for example, HSES parents report reading a story book to their children 3 to 4 times a week, compared to only once a week in the LSES group (Authors, 2008).

It is important to note that this study has some limitations, and caution should be exercised when interpreting the findings. First, since the data presented in this paper are correlational in nature, readers should exert caution not to infer causal relationships found between variables. Second, replications with larger samples and with participants from different languages and cultures should be carried out to further establish the main findings concerning educators' estimations of early literacy.

In conclusion, this study indicates that teachers, parents and SES group could serve as a good estimation for children's success in reading and writing in first grade, with the teachers' estimation being the most accurate. Two major pedagogical implications can be drawn from these findings. First, as noted before, teacher estimations that are usually less time consuming than direct assessment of the children's reading and spelling levels can serve as practical and useful information in supporting children in the teaching process as more formal valid assessment tools. Second, that parents do have an idea about their children's literacy level but might need more information from the school system, and especially from teachers. This information is important for building mutual knowledge of teachers and parents on the children's abilities, which might be more effective in supporting the school beginner.

Estimation is only a first step in the process and an interaction between the teacher and the child following the estimation may be the more critical step in the teaching model. Educators from different communities (high and low SES) attribute higher abilities to the young children. However, they may act in a different way following this knowledge. These relations between the educators' estimations, their teaching behavior following the estimation, and the children's actual early literacy level are important and should be the focus of future studies.

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